

**U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
PALM SPRINGS-SOUTH COAST FIELD OFFICE**

**ENVIRONMENTAL ASSESSMENT  
EA Number CA-660-04-22**

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<b>DATE:</b>	Thursday, August 12, 2004
<b>TITLE / PROJECT TYPE:</b>	2740 – Recreation & Public Purposes (R&PP) Lease Renewal
<b>CASE FILE / PROJECT NO:</b>	R-3962
<b>FUNDING CODE:</b>	<b>PROGRAM ELEMENT:</b> 1430
<b>BLM OFFICE:</b>	Palm Springs-South Coast Field Office 690 W. Garnet Avenue, P.O. Box 581260 North Palm Springs, CA 92258-1260
<b>APPLICANT / PROPONENT:</b>	Inland Fish & Game Conservation Association
<b>LOCATION OF PROPOSED ACTION:</b>	Township 1 S., Range 3 W., SBBM. Section 10: NW¼NE¼ San Bernardino County, California
<b>PROJECT ACREAGE:</b> BLM	40
<b>USGS TOPOGRAPHIC MAP:</b>	Redlands -7.5 minute quad

**LAND USE PLAN CONFORMANCE and Other Regulatory Compliance:**

**BLM land use plan:**

In accordance with Title 43, Code of Federal Regulations §1610.5-3, all actions on public lands must be in conformance with applicable BLM land use plans. Any proposals determined not to be in conformance with these plans would require the analysis of a land use plan amendment. However, the proposed action and alternatives analyzed in this environmental assessment are determined to be in conformance with the applicable land use plan for the affected area: the South Coast Resource Management Plan (RMP), dated May 26, 1994.

Under the South Coast RMP, this and two other nearby parcels have been designated as the Santa Ana River Area of Critical and Environmental Concern (ACEC) and Research Natural Area (RNA). This 755 acre ACEC was established to protect habitat for two federally listed plant species: the Santa Ana River wooly-star (*Eriastrum densifolium ssp. sanctoprimum*) and the

slender-horned spineflower (*Dodecahema leptoceras*). This ACEC is managed as a right-of-way avoidance area, is unavailable for mineral material sales, is closed to motorized vehicle use, and is unavailable for livestock grazing. However, this shooting range was authorized prior to the designation of this ACEC. No conflicts were identified in the land use plan between this shooting range and the ACEC designation.

### **Local land use plans:**

The lands under this lease are designated as open space under the “General Plan” for the City of Highland. The primary purpose of open space is for recreational facilities and uses, preservation of environmental values, managed production of resources, and protection of public safety. Subject to applicable Highland General Plan provisions and City ordinances, only uses consistent with the provision of recreation and community/cultural activities, and which are consistent with the protection of the public health and safety may be considered appropriate within these open space areas. The maximum land use intensity is governed by the open space purpose of the land so designated.

### **Local habitat conservation planning:**

A coordinated effort has been initiated to develop a land use and habitat conservation plan for the Santa Ana Wash area located in the general vicinity of the shooting range. Cooperators in this planning effort are the BLM, San Bernardino County, the cities of Highland and Redlands, San Bernardino Valley Water Conservation District (SBVWCD), County Flood Control, U.S. Fish and Wildlife Service, State Department of Fish and Game, Army Corp of Engineers, Orange County, State Department of Transportation, two municipal water districts and two mining companies (CEMEX USA and Robertson's Ready Mix).

Lands in this planning effort are bounded on the west by Alabama Street, on the south by the Santa Ana River, on the east by Greenspot Road, and the north by Greenspot Road and Fifth Street. As currently envisioned, this coordinated management plan would allocate lands for aggregate mining, flood control, habitat protection and water conservation based on existing resource values. As part of this proposal, the SBVWCD proposes to acquire 516 acres of public lands in exchange for 516 acres of offered SBVWCD lands that are presently under mining leases. The SBVWCD would then, with the lessee's concurrence, transfer the existing mining leases to the lands acquired from the BLM. The BLM would manage the lands acquired from the SBVWCD, under the regional plan, for habitat protection and ground water recharge.

Several areas inside of this planning area have been eliminated from the planning effort including this 40 acre shooting range site. Although no initiatives or actions directed by this planning effort would impact the operation of this facility, the BLM will endeavor to minimize conflicts between this plan and operation of the shooting range.

### **Regulatory Compliance:**

In addition, no other laws or regulations are known to apply that would raise conformance issues related to the existence of this facility. Under the Federal Land Policy and Management Act of

1976 (FLPMA), the BLM is charged with managing public lands in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values. This facility is within the range of uses authorized on public lands under FLPMA.

In 1954, the U.S. Congress enacted the Recreation and Public Purposes (R&PP) Act (68 Statute 173; 43 United States Code 869 et. Seq.) that authorizes the sale or lease of public lands for recreational or public purposes to State and local governments and to qualified nonprofit organizations. Examples of typical uses under the act are historic monument sites, campgrounds, schools, firehouses, law enforcement facilities, municipal facilities, hospitals, parks, and fairgrounds. This shooting range continues to be in conformance with the R&PP Act as related to leases to qualified nonprofit organizations.

The National Historic Preservation Act of 1966 (PL 102-575) requires Federal agencies to take into account the effects of their undertakings on historic properties and establishes State Historic Preservation Officers (SHPO) to, among other responsibilities, participate in the review of Federal undertakings that may affect historic properties. This review by SHPO, under Section 106 of the Act, is directed by the 1998 *State Protocol Agreement Between The California State Director of The Bureau of Land Management And The California State Historic Preservation Officer*. This protocol streamlines the consultation process by not requiring consultation on most individual undertakings. The BLM determined that, under this protocol, consultation with SHPO is not necessary for this proposed lease renewal (see Sec. 6, Affected Environment).

The BLM is required to consult with the U.S. Fish and Wildlife Service (FWS), under Section 7 of the Endangered Species Act (ESA) of 1973, on any proposal that may effect species and their habitat that are listed as threatened or endangered under this Act. In addition, the BLM insures that no actions on public lands result in harm to these species or adverse modification to designated critical habitat, as required by and defined in the ESA. The BLM and FWS determined that this consultation process is not necessary as renewal of this lease, without any proposed changes to the facility or operations, would not result in incidental take of listed species.

## **NEED FOR THE PROPOSED ACTION**

The Inland Fish & Game Conservation Association applied for a twenty year lease renewal for their shooting range, located on public lands at 8207 N. Orange Street in Highland, California, that is due to expire on August 13, 2004. The existing lease and renewal application are made pursuant to the Recreation and Public Purposes Act (R&PP) of 1954 (68 Statute 173; 43 United States Code 869 et. Seq.). Renewal of this lease is required if this organization is to continue operating this facility at its present location.

## **DESCRIPTION OF THE PROPOSED ACTION and ALTERNATIVES**

### **1. Proposed Action Alternative**

The Inland Fish & Game Conservation Association, Incorporated proposes to renew their existing Recreation & Public Purposes Act lease for a twenty year term, to expire on August 13, 2024. No additional surface disturbances or changes in operation of the facility are proposed.

### **2. Environmental Constraints Alternative**

The public raised several concerns relating to noise impacts and land use compatibility during the issue identification portion of this environmental review process. These issues include reducing hours of operation and limiting the term of the lease to five years. In response to these issues, this alternative would adjust the hours of operation as follows:

- close the facility at 8:00pm on Wednesday evenings,
- close the facility every other Sunday,
- restrict open Sunday operations to ½ days (11:00am-3:00pm), and
- limit the term of the lease to 5 years in order to more frequently address land use compatibility issues.

### **3. Agency Preferred Alternative**

In response to noise impacts on adjacent residential land owners, this alternative would require modification of the existing lease as follows:

- restrict operation of the shotgun range to after 9:30am on Sundays,
- implement effective sound attenuating measures at the rifle/handgun range within one year of lease renewal, including addition of effective sound absorbing baffles, flooring, rear and wing walls and other effective structural designs; also, test and implement use of noise attenuating shooting tubes for bench rest shooting applications if they prove to be effective in reducing noise levels, and
- renew the lease for 20 years.

### **4. No Action Alternative**

With this alternative, the lease would not be renewed and the facility would be removed. The lease holder would be required to vacate these lands and then cleanup and rehabilitate the site.

## **AFFECTED ENVIRONMENT**

Inland Fish & Game Conservation Association was incorporated as a non-profit mutual benefit corporation on October 1, 1945. The Association conducted shooting activities at this site, as an affiliate of Rancho Gun Club, from 1945 until assuming full operation on February 20, 1964 under a R&PP Act lease. On August 13, 1984, this lease was renewed with an expiration date of

August 13, 2004. Under lease, Inland Fish and Game has conducting a wide variety of sport shooting activities at this site.

Membership in the Association has averaged 1,450 during the last several years with this facility being open to both members and the general public. The following facilities are authorized on these 40 acres of public (see map and photos in appendix):

- a club house with meeting, pro-shop and kitchen facilities;
- a shotgun range offering trap, skeet and sporting clays (with shelter, tables and berm);
- a 200 yard rifle and handgun range (with shelter, tables, benches, storage room, targets and backstop);
- portable storage buildings;
- various storage structures;
- outside scout meeting area; and
- large parking area.

The Inland Fish & Game rifle and pistol range is open to the public from 8:00 a.m. to 5:00 p.m., Tuesday through Sunday. On Mondays, the rifle and pistol range is open to law enforcement agencies only. The shotgun range, offering trap, skeet and sporting clays, is open on Wednesdays from 8:00 a.m. to 12 noon and 6:30 p.m. to 9:30 p.m. and on weekends from 8:00 a.m. to 5:00 p.m. In addition, there are various special shooting events throughout the year that are usually conducted on weekends or holidays.

Membership in the Association has averaged 1,450 during the last several years. General revenues of the Association are made through sales of shotgun targets (35%), rifle and handgun targets (25%), pro-shop equipment (21%), memberships (11%), snackbar items (7%), and miscellaneous (1%). Over 1 million clay targets were used per year for sport shooting during 2002 and 2003. Over 11,000 shooters per year utilized the rifle and handgun range during this same period with this use being nearly evenly split between members and non-members. In addition, Inland Fish and Game sponsors Boy Scout Troop #19 by providing funding, storage facilities, a meeting location and other support; provides their shooting facility to law enforcement agencies for training and firearms qualification purposes; and opens their club house to a variety of civic, youth and other organizations.

## 2. Area Description

San Bernardino and Riverside Counties are identified as one of the fastest growing metropolitan regions in the nation. Within San Bernardino County, the City of Highland is one of several communities experiencing record levels of population and urban growth.

The project site, located within the City of Highland, is adjacent to Plunge Creek and in the Upper Santa Ana River Wash area. Numerous land uses exist within several miles of the shooting range including commercial and residential development, sand and gravel mining, agriculture, ground water recharge, flood control and open-space recreation.

The Highlands Ranch and Village Lakes residential areas, as well as other dispersed homes are

located both north and east of the range. Available lands in the general vicinity of the range are anticipated to experience high levels of residential and commercial development in the future.

### 3. Vegetation

The site supports two plant communities with the majority of the site being dominated by ruderal grasslands. Small isolated patches of remnant emergent alluvial fan scrub are found throughout the area. Grasses and weedy forbs in this area are dominated by red brome (*Bromus madritensis*), tarweed (*Hemizonia sp.*), ripgut brome (*Bromus diandrus*), red-stemmed filaree (*Erodium cicutarium*) and short-podded mustard (*Hirschfeldia incana*). The remnant alluvial fan species areas are characterized by yerba santa (*Eriodictyon trichocalyx*), scale broom (*Lepidospartum squamatum*), Indian tree tobacco (*Nicotiana glauca*), flat-top buckwheat (*Eriogonum fasciculatum*), deer weed (*Lotus scoparius*), California croton (*Croton californica*), cholla (*Opuntia sp*), and prickly pear (*Opuntia spp*). Ground cover is typically open and dispersed.

### 4. Special Status Plant Species

Slender-horned spineflower (*Dodecahema leptocera*)

Federal: Endangered

State: Endangered

Slender-horned spineflower ranges from central Los Angeles County east to San Bernardino County, and south to southwestern Riverside, however, the specie is limited to only several areas including the Santa Ana River wash. This plant specie is mostly found in sandy soil, in association with mature alluvial scrub and cryptogamic soil crusts, and is generally dependent on mature scrub habitats that are maintained by periodic flooding and sediment transport. The survival of this species depends on adequate alluvial scrub habitat and maintenance of active fluvial processes. Although a known inhabitant of the surrounding Santa Ana Wash area, there are no known occurrences of this specie at this project site.

Santa Ana River woollystar (*Eriastrum densifolium sanctorum*)

Federal: Endangered (September 28 1987)

State: Endangered

The Santa Ana River woolly-star is found within open washes and within early-successional alluvial fan scrub habitats. Suitable habitat is comprised of a patchy distribution of gravelly and sandy soils, rock mounds and boulder fields where scouring occur at a frequency that allows for the persistence of scrub habitat. This species is a low shrubby perennial that blooms from June to August. Although a known inhabitant of the surrounding Santa Ana Wash area including lands adjacent to the project boundary, there are no known occurrences of this specie at this project site.

## Special Status Animal Species

### Small Mammals

The San Bernardino kangaroo rat (*Dipodomys merriami parvus*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), and San Diego desert woodrat (*Neotoma lepida intermedia*) are small mammals identified as being potentially present in the vicinity of this project. Of the animal species potentially present, only the San Bernardino kangaroo rat requires specific survey protocols to establish presence or absence. These specific survey protocols are required for areas where impacts may occur to the sensitive species or their occupied habitat. The remaining species are usually identified through casual observation or as a result of trapping for the San Bernardino kangaroo rat.

#### San Bernardino kangaroo rat (*Dipodomys merriami parvus*)

The Merriam kangaroo rat is a widespread species that can be found from the inland valleys to the desert regions. The San Bernardino kangaroo rat is one of three subspecies of the Merriam kangaroo rat (*Dipodomys merriami*). The San Bernardino kangaroo rat (*Dipodomys merriami parvus*) is described as being confined to primary and secondary alluvial fan scrub habitats, with sandy to loamy soils deposited by fluvial (water) rather than aeolian (wind) processes. These habitat areas consist of river, creek, stream, and wash channels; alluvial fans; floodplains; floodplain benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes typical of fluvial systems.

Upland areas adjacent to floodplains can also be suitable habitat. In addition, the San Bernardino kangaroo rat is also known to inhabit human disturbance areas including margins of orchards and out-of-use vineyards and areas of wildland/urban interface. San Bernardino kangaroo rats are generally granivorous (feeds on seeds and grains) with green vegetation and insects being important seasonal food sources. Burrows are dug in loose soil, usually near or beneath shrubs.

Most of the drainages inhabited by San Bernardino kangaroo rats have been historically altered as a result of flood control efforts and the resulting increased use of river resources including mining, off road vehicle use as well as road and housing development. The increased use of river resources has resulted in a reduction in both the amount and quality of habitat available for the San Bernardino kangaroo rat. Past habitat losses and potential future losses prompted the emergency listing of the San Bernardino kangaroo rat as an endangered species in January, 1998. On September 24, 1998, the U.S. Fish and Wildlife Service (FWS) published a final rule determining that the San Bernardino kangaroo rat is endangered under the Endangered Species Act (ESA) of 1973, as amended.

On April 23, 2002, the FWS published a final rule that designated critical habitat for the San Bernardino kangaroo rat. Critical habitat is defined as areas that have the physical and biological features that are essential to the conservation of the species and that require special management or protection. Critical habitat receives protection under the ESA through a prohibition against destruction or adverse modification of critical habitat including adversely

modifying any of those physical or biological features that were the basis for determining the habitat to be critical.

The FWS delineated four critical habitat units in Riverside and San Bernardino Counties, one of which is the 8,935 acre Santa Ana River Unit. This critical habitat unit incorporates all public lands within the BLM designated Santa Ana River Area of Critical and Environmental Concern (ACEC) including the 40 acres leased by the Inland Fish and Game Association. A phase one San Bernardino kangaroo rat evaluation was conducted of the shotgun range berm area on February 18, 2003. During this survey, limited sign attributable to kangaroo rats was found at several locations within this area. This sign was found on the top and southern slopes of the berm and is attributable to both Dulzura and San Bernardino kangaroo rats. Based on historic information, occurrences in adjacent areas, and this survey, San Bernardino kangaroo rats are believed to occur at this project site.

#### Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)

The northwestern San Diego pocket mouse, a State species of concern, prefers habitat similar to that preferred by the SBKR. The northwestern San Diego pocket mouse occurs in open, sandy areas in the valleys and foothills of southwestern California.

The range of this species extends from Orange County to San Diego County, and includes Riverside and San Bernardino counties. This mouse is a California Species of Special Concern whose historical range has been reduced by urban development and agriculture. Based on surveys completed on February 18, 2003, the northwestern San Diego pocket mouse is believed to occur at this project site.

#### San Diego Desert Woodrat (*Neotoma lepida intermedia*)

The desert woodrat, a State species of concern, is a relatively wide-ranging species extending along the coast of California from south of San Francisco through to the border with Baja California. This species also occurs in the Central Valley and the deserts of southern California and extends along the desert side of the Sierra Nevada into southeastern Oregon.

The coastal race of the desert woodrat, the San Diego desert woodrat (*Neotoma lepida intermedia*), prefers scrub habitats such as coastal sage scrub, chaparral and alluvial fan scrub. It is more common in areas with rock piles and coarse sandy to rocky soils throughout coastal southern California. This species is considered a likely inhabitant of this project site. There are no documented threats to the desert woodrat other than the general loss of coastal sage scrub habitat to agricultural and urban development. A potential long-term threat to the species is isolation and fragmentation of habitat.

### Birds

#### Coastal California Gnatcatcher (*Poliophtila californica californica*)

The Coastal California Gnatcatcher is federally listed as threatened under the ESA and occurs

almost exclusively in the coastal sage scrub plant community and, occasionally, in chaparral and Riversidean alluvial fan sage scrub. Coastal sage scrub vegetation is composed of relatively low-growing, summer (dry-season) deciduous and succulent plants. The breeding season of the gnatcatcher extends from mid February through mid-August, with the peak of nesting activity occurring from mid-March through mid-May.

The principal reasons for the gnatcatcher's current threatened status are habitat destruction, fragmentation and adverse modification. The amount of coastal sage scrub available to gnatcatchers has continued to decrease during the period after the listing of the species. Although a known inhabitant of the surrounding Santa Ana Wash area, there are no known occurrences of this specie at this project site.

#### Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

The Southwestern Willow Flycatcher is state and federally listed as endangered. The Southwestern Willow Flycatcher is restricted to riparian woodlands along streams and rivers with mature, dense stands of willows (*Salix* spp.), cottonwoods (*Populus* spp.) or smaller spring fed or boggy areas with willows or alders (*Alnus* spp.). Riparian habitat provides both breeding and foraging habitat for the species. The Southwestern Willow Flycatcher has declined during the last 100 years, primarily due to the loss, fragmentation, and modification of riparian habitats.

Brood parasitism by the brown-headed cowbird also threatens this specie. Although considered a possible inhabitant of the surrounding Santa Ana Wash area, there are no known occurrences of this specie at this project site.

#### 5. Archaeology

The proposed APE (Area of Potential Effect) was inspected, following BLM Class I and II survey guidelines, in April, 2003. A review of available records for the area indicates that there are no known and recorded archaeological or historic properties located on public lands subject to this renewal. The literature review also indicates that this parcel has not been subjected to a systematic survey for cultural properties. However, the field inspection of the APE observed that these lands have been substantially disturbed and altered as a result of existing developments and improvements. As a result, the general surface integrity and context associated with any potential historic properties appears to have been compromised. The BLM, therefore, determined that this renewal action would be an exempt undertaking in accordance with the *State Protocol Agreement Between The California State Director of The Bureau of Land Management And The California State Historic Preservation Officer* (1998) (Section V.A and V.B) based on:

- the physical condition of the property,
- the absence of known and recorded cultural properties, and
- the nature of the lease renewal involving a continuation of the existing R&PP Act lease without any changes in facilities or operations.

#### 7. Visual Resources:

In accordance with the South Coast RMP, the subject parcel is designated as a Visual Resource Management (VRM) Class 3 area. Renewal of the R&PP lease is an administrative action that would result in no new disturbances to the existing landscape. Therefore, no new impacts to visual resources would occur.

## 8. Safety

Safety measures currently implemented at this facility:

- Chain link fencing on the frontage roads with a combination barbed wire fence and a locked chain link gate at the facility entrance.
- Posted warning signs around the property.
- Safety regulations and requirements for shooters posted at the rifle and pistol and shotgun ranges in highly visible locations.
- Berms located to the north are 30 feet tall, running the entire length of the range east to west.
- Berms surrounding the rifle and pistol range are 40 feet tall and 200 meters deep.
- Range personnel in place to enforce safety regulations.
- Safety barriers in place to separate onlookers from the different shooting areas (chain link fencing).
- Enforcement of all safe gun handling regulations as well as use of eye and ear protection.
- Handicapped access ramps in place to provide access to the restrooms, clubhouse and all shooting areas.
- Misting systems to provide shade and prevent overheating of participants during hotter weather; air conditioning in the clubhouse.
- Range personnel and volunteers trained and licensed to perform CPR and emergency first aid.
- Emergency phone numbers and protocol posted and first aid kits in place along the firing lines and in the clubhouse.

## 9. Minerals

There are presently 845 acres permitted for aggregate mining, out of a total 1,158 acre designated for this purpose, within the Santa Ana Wash planning area. However, there are no permitted aggregate mining operations on BLM lands in this area, including the 40 acres under lease by Inland Fish and Game. Mining operations, controlled by Cemex Construction Materials and Robertson's Ready Mix, are located within ¼ miles south and west of this range. In addition, the Match Batch Plant and the A-1 Grit Plant are located on seven acres east of Alabama Street and approximately 1.5 miles from this range.

Robertsons Ready Mix is permitted for and produces 2 million tons of material per year resulting in about 300 trucks per day leaving their facility. Their processing plant is located just to the west of the shooting range and covers about 110 acres. Their mine is currently on about 175 acres, out of 208 acres permitted. They are permitted to operate from 5am-10pm (Mon.-Fri.), 6am to 6 pm on Saturday, and no Sunday operations.

The Cemex operation, located south of the shooting range, also produces 2 million tons per year resulting in about 300 trucks per day leaving their facility. Their current permit has no volume limitation. Operating hours are from 5am to 10pm, Monday through Friday. The processing plant is on 80 acres. They have 4 different pits from which they excavate material, totaling about 400 acres.

## 10. Noise

The local noise environment, surrounding the shooting range, is typical of urban areas in the region. The sources of local noise include:

- Traffic noise on freeways and surface streets.

Noise levels in proximity to moving trucks, passenger vehicles and motorcycles can generally range from 60 to 85 decibels depending on many variables. This noise is generally evident 24 hours a day with the sound levels being more consistent during the day but more pronounced at night.

State Highway 30, located one mile west of the shooting range, is a major freeway providing access to the Redlands, Highland, and San Bernardino communities as well as providing a major connector route between Interstate Highways 10 and 215. This noise is characterized by a large volume of trucks, passenger vehicles and motorcycles traveling at freeway speeds with characteristic high levels of engine, tire and air-flow noise.

Lower levels of vehicle noise are evident on local secondary streets including Orange and Fifth Streets as well as Boulder Avenue. To a much lesser degree, passenger vehicle, light truck and motorcycle noise is evident within residential areas located north of the shooting range.

- Commercial areas.

Commercial businesses are scattered in the vicinity of the shooting range consisting of stores, gas stations, storage facilities and a poultry farm. Noise associated with these facilities generally consists of vehicle and human related noises as people access and utilize these businesses. The majority of businesses operate during the day with the exception of the gas stations/stores.

- Aggregate mining operations.

Sand and gravel mining operations are located within .25 miles of both the south and west boundaries of this shooting range. Noise associated with these mining operations emanates from earth moving and loading equipment, processing and cement plants, and haul trucks. The most prominent noise levels are a result of processing operations and the use of trucks to haul cement and aggregate products. Robertsons Ready Mix operates Monday through Friday from 5am-10pm and on Saturday from 6am to 6 pm with

approximately 300 truckloads leaving the facility each day. The Cemex Construction Materials operation operates 5am to 10pm, Monday through Friday with approximately 300 also leaving this facility each day.

- Airport noise.

Both the San Bernardino International and the Redlands Municipal Airports are located within two miles of the shooting range. The San Bernardino International Airport has a 10,000 foot long runway that accommodates the range of aircraft up to large commercial passenger and cargo airplanes. The Redlands Municipal Airport accommodates mainly single engine aircraft for local general aviation use. In addition, this area can experience noise associated with commercial aircraft approaching the large and heavily used Ontario Airport, located 25 miles to the west of the shooting range. Aircraft noise is intermittent and is dependent on a range of variables including size, type and altitude of the aircraft as well as if the aircraft is engaged in takeoff, landing or cruising speed.

- Inland Fish and Game Shooting Range

The discharge of a wide variety of firearms at this facility creates noise that is heard both on and off-site. Typical peak sound levels on the firing line ranges from 152 to 164 decibels (dBs). These sound levels diminish as they radiate away from the shooting range depending on a wide variety of variables. This noise, associated with the discharge of firearms, is evident during the hours of operation for this facility.

#### 11. Land Status

**Land Use Classification:** Under the South Coast Resource Management Plan (1994) this parcel, along with two other parcels, have been designated as the Santa Ana River Area of Critical and Environmental Concern (ACEC) and Research Natural Area (RNA) for protection of Santa Ana River woolly-star and slender-horned spineflower.

**Valid Existing Rights:** The following land actions have been approved within the subject public parcel (i.e., within Section 10, Township 1 South., Range 3 West):

SERIAL NUMBER	AUTHORIZATION	SERIAL NUMBER	AUTHORIZATION
LA-0169868	R/W Transmission Line	CA-35275	R/W Water Facility
RI-03962	Recreation & Public Purpose Lease	CA-35816	R/W Access Road
CA-19146	R/W Access Road	CA-36490	R/W Access Road
CA-25557	R/W Access Road		

## ENVIRONMENTAL CONSEQUENCES

### A. Critical Elements

The following table summarizes potential impacts to various elements of the human environment, including the "critical elements" listed in BLM Manual H-1790-1, Appendix 5, as amended. Elements for which there are no impacts will not be discussed further in this document.

Environmental Element	Proposed Action	Environmental Constraints	Agency Preferred	No Action Alternative
Air Quality	No impact	No impact	No impact	No impact
ACECs	Indirect effect	Indirect effect	Indirect effect	Positive effect
Cultural Resources	No impact	No impact	No impact	No impact
Native American Concerns	No impact	No impact	No impact	No impact
Farmlands	No impact	No impact	No impact	No impact
Floodplains	Indirect effect	Indirect effect	Indirect effect	No impact
Energy (E.O. 13212)	No impact	No impact	No impact	No impact
Minerals	No impact	No impact	No impact	No impact
T&E Animal Species	No affect	No affect	No affect	Positive impact

T&E Plant Species	No affect	No affect	No affect	Positive impact
Invasive, Nonnative Species	No impact	No impact	No impact	No impact
Wastes (hazardous/solid)	Potential impact	Potential impact	Potential impact	Potential impact
Water Quality (surface and ground)	Potential impact	Potential impact	Potential impact	Potential impact
Wetlands/Riparian Zones	No impact	No impact	No impact	No impact
Wild and Scenic Rivers	No impact	No impact	No impact	No impact
Wilderness	No impact	No impact	No impact	No impact
Environmental Justice	No impact	No impact	No impact	No impact
Health and Safety Risks to Children	No Impact	No impact	No impact	No Impact
Visual Resource Mgmt.	No impact	No impact	No impact	No impact

## B. Discussion of Impacts

### 1. **Proposed Action:**

#### **Land use compatibility**

Renewal of the lease for 20 years would commit adjacent residential areas to potential annoyance noise levels throughout this period and would not allow for more frequently

addressing the compatibility of this shooting range with new and future uses of adjacent lands. These areas include The Highlands Ranch and Village Lakes residential areas, as well as other dispersed homes are located both north and east of the range.

### **Special Status Species**

Evidence of the San Bernardino kangaroo rat (*Dipodomys merriami parvus*), listed as endangered under the Endangered Species Act of 1973, as amended, was observed on the slopes of the shotgun berm located within this project site. Renewing the lease, without changes in facilities or activities, is not considered to result in any incidental take of San Bernardino kangaroo rats or adverse modification to the habitat of this specie.

### **Noise**

The discharge of a wide variety of firearms at this facility creates noise that is heard both on and off-site. Typical peak sound levels, measured in decibels (dBs), for these firearms are as follows:

<u>Firearm type:</u>	<u>dBs</u>
• .22 long rifle	152
• .223 rifle	155
• .30-30 rifle	156
• .308 rifle	156
• 30.06 rifle	159
• .380 auto pistol	158
• .357 magnum revolver	164
• .41 Magnum revolver	163
• .44 magnum revolver	164
• .45 ACP Pistol	157
• 12 gauge shotgun	156

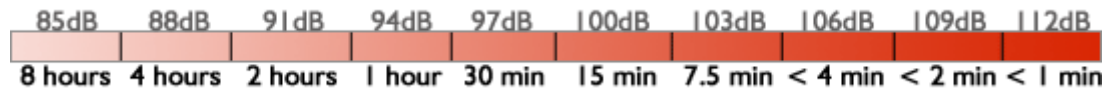
These sound levels exceed the threshold for physical pain and potential hearing loss for persons located at or in close proximity to the firing lines.

Decibels are based on a logarithmic scale in which 0 dB approximates the lowest threshold of hearing in the mid frequencies for young adults, 85 to 95 dB is the threshold of discomfort and 120 and 140 dB is the threshold for pain. General estimates of work-related noises, in decibels, are as follows:

<u>Noise examples:</u>	<u>dBs</u>
• normal conversation	60
• power lawnmower	90
• chain saw	110
• jet engine taking off	140
• rocket launch	180
• loudest tone possible	194

Figure 1 depicts the sound exposures, in minutes, in which hearing loss is likely to occur.

Figure 1.



Firearms shooting ranges are characterized by high impulse decibel levels that exceed thresholds for causing hearing loss. Hearing protection on or near the firing lines typically consists of ear plugs and ear muffs that are designed to reduce, or attenuate, this noise level to acceptable levels.

In the workplace, the Occupational Safety and Health Administration (OSHA) requires that employees be placed in a hearing conservation program if they are exposed to average noise levels of 85 dB or greater during an 8 hour workday. For employees in areas that exceed this level, hearing protection must be sufficient to reduce employee exposure to a time weighted average of 85 dB or less.

This noise exposure also extends beyond the boundary of this facility to outlying areas. The decrease in sound level over distance is affected by a number of factors including air quality, temperature, winds, humidity, ground cover, terrain and existence of barriers. Atmospheric conditions, including temperature, humidity, and winds, have a greater effect on higher frequency sounds such as the supersonic crack of a rifle bullet. The sound of wind at a recipient's ears will mask the sound of gunshots discharged at a distance. Winds also tend to cause a sound wave traveling with the wind to slope or bend toward the ground and seem louder downwind. A sound wave traveling against the wind will bend upward and away from the earth, hence developing a sound shadow very near the source. As a result, sound decreases upwind from the source.

Noise reflecting off surface areas, such as trees, grassy areas, hillsides, buildings, pavement, and firing line structures can all have an effect on off-site noise levels. While trees and other vegetation will decrease sound reflection, hard surfaces, such as pavement or sidewalks, do not result in an appreciable decrease in noise over distance. Barriers, such as hills and structures, will attenuate noise depending on the reflective nature of the surfaces and both the size and configuration of the barrier.

Terrain also has an effect on off-site noise levels. A firearms range in a depression will have natural sound barriers that will both decrease and redirect sound away from surrounding areas. However, a firearms range in a valley or river bottom will have a more pronounced impact on upslope areas if other barriers are lacking.

The off-site noise exposure for this shooting range is not within the exposure levels that could result in hearing loss. However, this off-site noise is clearly within nuisance levels that impact local residents and other people in the area. Noise annoyance is defined as a feeling of displeasure evoked by a noise. The level of annoyance-inducing capacity depends on many characteristics including intensity, sound spectral characteristics and variations of these over

time. However, human annoyance reactions vary considerably across the population and can be effected by social, physiological and economic factors.

In general, it is easier for people to get used to, or habituate to noise if it is continuous in level and intensity. In addition, day-time noise levels not exceeding 55 dB typically cause little or no annoyance in communities, especially in areas with local traffic and other similar noises. This is especially true in this area given the overall background noise levels from traffic, sand and gravel operations, nearby airports, and commercial areas. However, noise annoyance levels increase during certain time periods such as evenings (7-10pm), night (10pm-7am), along with weekends and holidays.

Although the effect of unwanted sound, or noise, can be vary throughout a population, noise can clearly have physiological or psychological effects on people. For example, loud, continuous and unwanted sound has been determined to impact recreation, sleep, communication, concentration, and the general feelings of wellbeing of many recipients. Noise exposure can also have negative economic impacts on affected areas including a reduction of land values.

The following comments, pertaining to the noise annoyance issue, were received from the public during the scoping process for this environmental assessment (see appendix 2):

- Noise is a real issue for local residents; if lease is renewed, then it should have stipulations for sound barriers and walls.
- The range should be relocated as means of eliminating noise issues: older adults and babies are disturbed by the noise.
- Noise is especially impacting on Wednesday evenings, sometimes to 10:00pm, and on weekends.
- Noise impact on local residents is significant as shooting range is in the low-lands and the local residential areas are on adjacent slopes resulting in the noise being heard for long distances.
- Noise is an issue that should be addressed. If lease is renewed, then the following mitigation should be required: 1. adjust hours of operation including closing facility at 8:00pm on Wednesday evenings; 2. do not allow magnum or hi-base loads, especially on Wednesday evening as they are significantly louder; 3. open one or two hours later on Saturday and Sunday mornings; and 4. close every other Sunday or restrict to ½ days (11:00am-3:00pm).
- Environmental conditions have changed in recent years including placement of two elementary and one middle school in proximity to the shooting range. The shotgun range directs gunfire at residential areas and schools. Most residential areas are at an elevation above the range that precludes possible screening. The range is open from 7:00am to 10:00pm at times with local residents hearing the gunfire, at times, from behind their closed windows. Elementary schools in area can hear the noise in their classrooms.

- The range is open all weekends and holidays such as Christmas and Easter; the church that meets at Arroyo Verde School on Sundays hears gunfire during Easter and Christmas services.
- It is not fair that nonresidents of East Highland come in and burden the local residents with gun noise.
- The sound of gunfire is difficult for local residents to overcome in evenings, especially during summer when windows are open.

### **Recreation**

The proposed action would provide for the ever increasing demand for sport shooting recreation opportunities. This demand includes the various forms of sport shooting including trap, skeet, target and silhouette shooting in individual, competition and tournament settings. This facility also provides opportunities for family and group recreational activities. The recreation user profile using this public facility is very diverse in age groups, economic backgrounds, and physical abilities. Overall, the need for this shooting facility has increased in recent years as other shooting ranges are closed and as shooting restrictions are implemented in the national forest and public lands within Southern California.

### **Wastes**

This alternative would result in lead, copper, steel and other bullet components being deposited within the shooting ranges including in the backstop berm. Over time, these solid wastes and potential contaminants, including lead and arsenic, would accumulate in surface soils. There is a potential for these contaminants to leach into surface and subsurface soil layers. Used gun cleaning solvents, oily rags and other related wastes can also accumulate unless disposed of properly.

## **2. Environmental Constraints Alternative:**

### **Land use compatibility**

Limiting the term of the lease to 5 years would allow for frequently addressing the compatibility of this shooting range with new and future uses on adjacent lands. This could have the positive effect of increasing land values in the immediate vicinity of the shooting range and in further addressing noise annoyance issues as the density of residential use in the vicinity increases.

### **Special Status Species**

Same as the Proposed Action Alternative (no incidental take of San Bernardino kangaroo rats or adverse modification to the habitat of this specie).

### **Noise**

The impacts of noise from the shooting range would be similar with the proposed action with the exception that the imposed restrictions on the hours of operation would eliminate the noise annoyance levels experienced by local residents during the following times:

- close the facility at 8:00pm on Wednesday evenings (in lieu of 9:30pm),
- close the facility every other Sunday,
- restrict open Sunday operations to ½ days from 11:00am-3:00pm (in lieu of 8:00am-5:00pm).

This is especially true since noise annoyance levels in the general population tend to increase during certain time periods such as evenings (7-10pm), night (10pm-7am), along with weekends and holidays.

However, restricting the hours of operation would concentrate use into shorter time periods resulting in an increase in the number and rate of firearm discharges and subsequent off-site noise levels during these periods. In addition, the short five year lease term would not allow the range to commit the funds necessary for expensive facility improvements, designed to attenuate the off-site noise levels, based on the uncertainty of obtaining lease renewals at the end of each term.

### **Recreation**

The environmental constraints alternative would provide for the ever increasing demand for sport shooting recreation opportunities, however, the reduced hours of operation from an average of 228 to 194 hours per month would decrease the numbers of sport shooters served. Restricting Sunday hours of operation from an average of 36 hours to 8 hours a month would substantially decrease the opportunities for family and group recreational activities, as well as tournaments that are all commonly held on weekends. Eliminating the morning hours on Sunday would also limit the availability of shooting when summer temperatures are the coolest. The short five year lease term would also not allow the range to commit the funds necessary for facility improvements, designed to improve the recreational and social experience at the range, based on the uncertainty of obtaining lease renewals at the end of each term.

### **Wastes**

This alternative would result in lead, copper, steel and other bullet components being deposited within the shooting ranges including in the backstop berm. Over time, these solid wastes and potential contaminants, including lead and arsenic, would accumulate in surface soils. There is a potential for these contaminants to leach into surface and subsurface soil layers. Used gun cleaning solvents, oily rags and other related wastes can also accumulate unless disposed of properly.

## **3. Agency Preferred Alternative:**

### **Land use compatibility**

Renewal of the lease for 20 years would commit adjacent residential areas to potential annoyance noise levels throughout this period and would not allow for more frequently addressing the compatibility of this shooting range with new and future uses on adjacent lands. These areas include The Highlands Ranch and Village Lakes residential areas, as well as other dispersed homes are located both north and east of the range.

However, a lease of 20 years would allow for the Association's expenditure of funds for substantial measures to decrease noise levels caused by shooting activities. In addition, implementing effective sound attenuating measures at the rifle/handgun range within one year of lease renewal would substantially decrease the levels of nuisance noise emanating from the shooting range.

### **Special Status Species**

Same as the Proposed Action Alternative (no incidental take of San Bernardino kangaroo rats or adverse modification to the habitat of this specie).

### **Noise**

Restricting the hours of operation for the shotgun range to after 9:30am on Sundays would lessen the annoyance levels experienced by local residents in the early hours of Sunday. This would partially mitigate the noise annoyance levels in the general population that tend to increase during certain time periods such as evenings (7-10pm), night (10pm-7am), along with weekends and holidays. However, restricting the hours of operation on Sunday would concentrate use into shorter time periods resulting in a slight increase in the number and rate of firearm discharges and subsequent off-site noise levels during the remainder of the day.

Implementing effective sound attenuating measures at the rifle/handgun range, within one year of lease renewal, would substantially decrease the annoyance sound levels emanating from this facility. Noise annoyance levels would also be decreased at the nearby schools upon implementation of the sound attenuating measures at the rifle/handgun range. This range accounts for nearly all of the noise propagated during normal school operations (Tuesday-Friday; 8:00am-5:00pm) as the shotgun range is only utilized from 8:00am to 12:00noon on Wednesdays.

The impacts from the shotgun range on nearby schools, amounting to four hours a week on Wednesday mornings, would continue to exist. In addition, all other noise impacts identified in the Proposed Action impacts section would continue to exist including those associated with the shotgun range from 6:00pm to 9:30pm on Wednesdays. These also include the annoyance sound levels emanating from the rifle/handgun range during the early Sunday morning hours, from 8:00am-9:30am, until effective sound attenuating measures are implemented.

## **Recreation**

This alternative would provide for the ever increasing demand for sport shooting recreation opportunities, however, reducing the Sunday hours of operation by 1.5 hours, from 9 to 7.5 hours per Sunday, would slightly decrease the numbers of sport shooters served. Restricting Sunday hours by 1½ hours per Sunday would also slightly decrease the opportunities for family and group recreational activities, as well as tournaments that are all commonly held on weekends. Eliminating these early morning hours on Sunday would also limit the availability of shooting opportunities when summer temperatures are the coolest. The 20 year lease term would also allow the range to commit the funds necessary for facility improvements designed to improve the recreational and social experiences at the range.

## **Wastes**

This alternative would result in lead, copper, steel and other bullet components being deposited within the shooting ranges including in the backstop berm. Over time, these solid wastes and potential contaminants, including lead and arsenic, would accumulate in surface soils. Used gun cleaning solvents, oily rags and other related wastes can accumulate and would need proper disposal.

### **4. No action alternative:**

## **Land use compatibility**

Denial of this lease renewal application and requiring removal of this facility would eliminate any existing and future land use compatibility issues with adjacent land uses and users.

## **Special Status Species**

Upon removal of the facilities, the lands would likely be managed for conservation purposes under the Upper Santa Ana River Wash Land Management and Habitat Conservation Plan that is presently under development.

## **Noise**

Upon expiration of the existing lease, all nuisance noise issues would end as no further use of this facility would be authorized.

## **Recreation**

Closure of this facility would substantially and negatively impact the members of this Association as well as the general public that utilize this facility. Unless other facilities are opened in the region to meet this need, the ever increasing demand in the region for sport shooting recreation opportunities would not be met. This impact would be substantial as other shooting ranges in the region have closed over the past years and as there is a trend toward restricting firearm shooting in the national forest and public lands within Southern California.

This unmet recreation demand includes the various forms of sport shooting including trap, skeet, target and silhouette shooting in individual, competition and tournament settings. In addition, family and other group recreation opportunities provided for at this facility would not be available. This impact would substantially impact some families that have established multi-generational traditions around this facility. In addition, closure would impact physically handicapped sport shooters as shooting facilities in Southern California offering full access are very limited.

### **Solid Wastes**

This alternative would result in the required cleanup of the lead, copper, steel and other bullet components that have been deposited within the shooting ranges including in the backstop berm. The BLM would require testing for and removal of any contaminated surface and subsurface soils and substrate as required under applicable regulations including the Resource Conservation & Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

#### **C. Proposed Mitigation Measures (all alternatives except No-Action)**

### **Noise**

1. Firearms shooting ranges are characterized by high impulse decibel levels that exceed thresholds for causing hearing loss. Requiring hearing protection on or near the firing lines, typically consisting of ear plugs and/or ear muffs that are designed to reduce this noise level to 85 dBs or less, would reduce or eliminate the threat of hearing loss.

2. Incorporating sound dampening features into the firing line shelter at the rifle and hand gun range would substantially reduce the noise emanating from this area. These features include but are not limited to:

- Replacing all or portions of the firing line shelter with high sound absorbing materials;
- Adding insulation or acoustical baffling to the underside of the firing line shelter;
- Enclosing the range with barriers that direct noise down-range and away from sound sensitive areas such as sound absorbing walls along the back wall of the shelter along with wing extensions built 20 feet beyond the firing line on each end of the shelter;
- Utilize sound absorbing flooring within the firing line shelter;
- For bench-rest shooting, utilize shooting tubes with internal baffles that reduce the discharge sound but allow for an unobstructed view of the target.

3. Very few options exist to lessen the noise emanating from the shotgun range where each clay target varies horizontally and vertically and where the movement of the firearm during shooting eliminates the possibility of enclosing the shooter. In addition, planting barriers of trees and shrubs have little effect on noise propagation unless the stand is continuous, very thick, and 50 or more feet wide. Raising the height of the existing earthen berm at the north end of the shotgun

range would reduce noise emanating to the north, however, the amount of noise reduction would be minimal due to the diffraction and reflection properties of sound.

4. As noise annoyance levels are known to increase during certain time periods, such as evenings (7-10pm), night (10pm-7am), along with weekends and holidays, the hours of operation could be reduced or eliminated during these times to lessen this impact. In addition, use could be limited during these time periods to firearms that propagate the lower decibel level noises.

### **Solid Wastes**

A shooting range contaminant abatement plan would be developed that outlines best management practices to retain lead and other contaminants in the surface soil horizons. These practices would include scheduled screening and recycling of spent lead bullets and shot along with assessments to determine if contamination levels exist that would require soil removal and disposal.

### **D. Residual Impacts**

All the alternatives involving renewal of the lease would result in residual noise impacts, of varying levels, on local residents in the area:

- The proposed action alternative would result in the highest levels of annoyance noise. This noise would be most prominent on Wednesday evenings (6:00-9:30pm) and on weekends (8:00am-5:00pm) when noise sensitivity levels are elevated among a portion of the population.
- This residual noise would be less under the agency preferred alternative when the hours of operation would be reduced by 1.5 hours (8:00am-9:30am) on Sundays. This alternative recognizes that noise annoyance levels are generally highest during the very early morning hours on Sunday. The addition of noise reducing structures to the rifle/handgun range under this alternative would also substantially lessen the noise emanating from this facility.
- This residual noise would be the least under the environmental constraints alternative when the hours of operation would be reduced by 1.5 hours (8:00-9:30pm) on Wednesday evenings, by 5 hours on Sundays when the facility is open (8:00-11:00am and 3:00-5:00pm) and by 9 hours when the facility is closed on every other Sunday.

### **E. Cumulative Impacts**

Renewal of this lease under each of the alternatives, excluding no action, would result in the continuation of this facility at its present location. As no changes in the current facility and operation are proposed, these alternatives would not present any cumulative impacts in the general area. However, substantially more growth and development of this general area is anticipated to continue over the next decades. This development will result in numerous changes to the social and environmental characteristics of the area surrounding this facility.

## **FREEDOM OF INFORMATION ACT CONSIDERATIONS:**

Public comments submitted for this environmental assessment, including names and street addresses of respondents, will be available for public review at the Palm Springs-South Coast Field Office during regular business hours (7:45 a.m. to 4:30 p.m.), Monday through Friday, except holidays. Individual respondents may request confidentiality. If you wish to withhold your name or address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your comments. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

## **PERSONS / AGENCIES CONSULTED:**

United States Fish & Wildlife Service, Carlsbad Field Office  
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